DOCKET FILE COPY ORIGINAL

ORIGINAL

RECEIVED

FEB 23 1993

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Amateur Service	)	**PR Docket No. 92-289**
Rules Concerning the 222-225 MHz	)	
and 1240-1300 MHz Frequency Bands	)	

To: The Commission

COMMENTS OF THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED

THE AMERICAN RADIO RELAY
LEAGUE, INCORPORATED
225 Main Street
Newington, CT 06111

Christopher D. Imlay
BOOTH, FRERET & IMLAY
1233 20th Street, N. W.
Suite 204
Washington, D. C. 20036

February 23, 1993

TABLE OF CONTENTS

SUMMARY

The American Radio Relay League, Incorporated respectfully submits its comments in response to the Notice of Proposed Rule Making (the Notice) in this proceeding. The League supports the Commission's proposals to create a small non-repeater, non-auxiliary subband at 222.000 - 222.150 MHz, in which so-called "weak signal" operation can be conducted, and to expand the operating privileges of Novice class licensees to include the entire 222-225 MHz band. Each of these proposals was based on a League petition for rule making.

The League opposes the proposal to permit Novice class licensees to be the licensees or control operators of amateur stations in repeater operation. Such is at variance with the licensing scheme for Novice class amateurs, and constitutes an unjustified change in view of the ready availability of the Technician class license, also an entry level amateur radio license class.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Amateur Service Rules Concerning the 222-225 MHz and 1240-1300 MHz Frequency Bands	)	**PR Docket No. 92-289**

To: The Commission

COMMENTS OF THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED

The American Radio Relay League, Incorporated (the League), the national non-profit association of amateur radio operators in the United States, by counsel, and pursuant to Section 1.415(a) of the Commission's rules (47 C.F.R. §1.415(a)), hereby respectfully submits its comments in response to the Notice of Proposed Rule Making (the Notice), 7 FCC Rcd. 8000 (1992). The Notice addresses three different petitions for rule making, each relating to amateur operating privileges in the 222-225 MHz band.[1] One relates, additionally, to Novice class operating privileges in the 1240-1300

[1] See, RM-7868, which requests expansion of the frequency privileges available at 222-225 MHz to Novice class licensees, and RM-7869, which would create a subband at 222.000 - 222.150 MHz where repeaters and auxiliary operation would not be permitted.

MHz band.[2] With respect to the Notice proposals, the League states as follows:

I. The 222.0 to 222.150 MHz Weak Signal Subband

1. The League initially proposed the creation of a so-called "weak signal"[3] subband (perhaps more accurately for regulatory purposes referred to as a non-repeater, non-auxiliary operation subband). The goal was to restore a small portion of a formerly 500 kHz-wide subband for such operation which was lost when the 220-222 MHz subband was reallocated to the private land mobile radio services.[4] The proposal to create a weak signal segment in the 222-225 MHz segment is no more than an effort to protect the ability of certain amateurs to conduct a wide variety of experimental operation, propagation research, and non-repeater, non-auxiliary operation generally in a small portion of the band, similar to (but

---

[2] See, RM-7888, filed by Michael C. Trahos, which proposes that Novice class licensees be permitted to be the control operators of repeater stations at 222-225 MHz and 1270-1295 MHz.

[3] "Weak signal" is a widely used generic term in the Amateur Radio Service, which refers to many types of VHF and UHF operation on narrow bandwidth modes, including CW and SSB, and utilizing many forms of propagation, including moonbounce, meteor scatter, tropospheric ducting, E-skip, aurora, and the like. The term "weak signal" refers to the received signal, which is often of low intensity, especially in Earth-Moon-Earth operation and in long-distance VHF and UHF communications, requiring sensitive receivers and low-noise preamplifiers.

[4] The Commission's rules governing repeaters, prior to the removal of the 220-222 MHz segment from amateur use, prohibited the operation of repeaters at 220.000 - 220.500 MHz. [47 C.F.R. §97.85(h) (1985)] Auxiliary operation was prohibited below 220.5 MHz as well [47 C.F.R. §97.86(d) (1985)], thus protecting a 500 kHz segment from repeater and auxiliary operation.

smaller than) protected weak signal subbands in other amateur VHF and UHF allocations.

2. There is already a significant base of comments in this proceeding on this subject, filed in response to the League's Petition for Rule Making, RM-7869, filed November 12, 1991. Comments filed since the issuance of the Commission's Notice on this subject express similar sentiments. The comments fall into two camps. Weak signal users support the proposal as a necessary means of protecting their non-repeater, non-auxiliary operations from interference. They note that volunteer band planning and repeater coordination, which is necessary in many respects, is nonetheless in this context insufficient to protect against repeater operation. They assert that repeater operation on a co-channel or adjacent channel basis can and does cause interference to their SSB and CW operation at 222 MHz using specialized techniques. Commenters from Southern California note that an uncoordinated repeater was established at 222.050 MHz recently, which is completely incompatible with their operations, and has in fact disrupted the same.

3. Some repeater users, on the other hand, view the matter as a challenge to the basic concept of voluntary local and regional band planning, and to the coordination process. They claim that certain repeater stations, principally in southern California, will be displaced by the creation of a weak signal subband 150 kHz wide. Certain commenters from Northern California have claimed in comments already filed in response to the Notice that a digital

link which presently apparently operates in an auxiliary mode at 222.140 MHz, and which connects packet stations in Nevada and Northern California, will be displaced and cannot, because of its path length and dependence on knife-edge refraction over mountainous terrain, be replaced in a higher frequency band.[5]

4. The League stated in reply comments in RM-7869, and remains persuaded, that the issue is reflective not of any one group of amateurs refusing to accommodate another, but rather of the difficulty of reaccommodating amateur users displaced from the 220-222 MHz segment. There appears no dispute that the weak signal operators are entitled to pursue a variety of weak signal operations in some segment of the 222 MHz band, nor is there any disagreement that such operations are incompatable with repeater and auxiliary link operations on the same frequencies. The League continues to support the creation of a small subband to replace the 500 kHz subband lost to the weak signal operators at 220.0 - 220.5 MHz. It is necessary to create such a subband by rule, rather than to rely on voluntary repeater coordination in this instance,

[5] There appears no claim, however, in those identically worded comments, that the specific link to which the comments refer cannot be moved to a higher frequency within the 222.150 - 225.000 MHz segment. In this respect, it is noteworthy that the League has requested, in RM-7747, that the Commission create a secondary amateur allocation at 216-220 MHz for fixed, point-to-point amateur operation, principally to permit digital and other links, including auxiliary links displaced from the 220-222 MHz band. That petition is long pending, and awaits Commission action.

because of the need for uniformity of the segment nationwide,[6] and because there is no enforcement authority for the band planning decisions of the volunteer amateur coordinating body with respect to interference to incompatible modes.[7] In fact, there is an incentive for uncoordinated repeater operators to locate in a voluntarily established weak signal band, because such would assure that the uncoordinated repeater will not interfere with coordinated

---

[6] The League's Reply Comments in RM-7869 stated, in part, as follows:

> The League asserted when it filed its petition, and remains convinced now, that there is a necessary place in each amateur VHF and UHF allocation for important scientific experimentation, and for amateur uses other than repeaters and auxiliary operation. A non-repeater, non-auxiliary subband, be it based on volunteer agreement or Commission rule, should be uniform nationally. This is facially apparent: regional differences in the location of a weak-signal subband are self-defeating where long-distance communication experiments, often involving many stations, at many locations throughout the United States at the same time, are being conducted.

[7] As the League's Reply Comments in RM-7869 noted:

> The sole penalty for operating a repeater in a segment reserved by volunteer agreement for weak signal work is that such repeater will be deemed to be uncoordinated. The effect of that determination, however, has no bearing on repeater interference to weak-signal operations. According to Section 97.205(c) of the Commission's Rules, an uncoordinated repeater must bear the burden on interference resolution to coordinated repeaters, but no more than that. The local coordinating body cannot order off the air uncoordinated users, and it cannot therefore protect the weak signal operators from interference from uncoordinated repeaters. Thus, despite the best intentions, creative planning and effort of the coordinating entity in creating workable compromise band plans together with representatives of all amateur operating interests in the band, there is no regulatory protection against incompatible users.

repeaters (which would not operate in a weak signal segment, in accordance with a local band plan), and thus bear the burden of interference resolution pursuant to §97.205(c). An additional factor is that manpower limitations currently permit little assistance from the Commission in resolving amateur-to-amateur interference situations. If present levels of assistance from Commission field offices in such situations are to continue, as budgetary considerations would seem to dictate, the Commission's rules should at least provide the necessary interference avoidance mechanism so that interference situations on the local level do not materialize in the first place.

5. Nor does the League's support for the creation of a weak signal subband by rule (versus volunteer local-option band planning and frequency coordination), indicate any lack of support for local band planning efforts or local frequency coordination. Quite the contrary. Generally, deference should be accorded regional variations on the League's national band plans, and such should be left to the amateur community to develop without regulatory intervention. National voluntary band planning, and to the extent dictated by the environment, local or regional variations thereon, are critical for efficient spectrum utilization. The process works well generally. Repeater coordinators have done a creditable job, faced with a very bad situation, in reaccommodating displaced repeater and auxiliary stations from the 220-222 MHz segment. The League does not minimize the difficulties faced in Southern California and elsewhere in dealing with the reaccommodation of

displaced repeaters at 222-225 MHz. The alternative, however, is clearly to disenfranchise those who would use operating modes other than repeaters in any segment of the 222-225 MHz band, as the result of exposure to interference. Such is neither fair, nor a reasonable accommodation for those who use other than FM repeaters in the residual band.

6. As the Notice suggests, the availability of a small protected subband at 222.000 - 222.150 MHz would facilitate experimentation. Because it constitutes no more than the reestablishment of a portion of a 500 kHz weak signal segment lost in its entirety due to the reallocation of 220-222 MHz,[8] and because it is a considerably smaller segment than that reserved for such operation in other VHF and UHF bands both higher and lower in frequency, the League continues to support the creation of the subband as proposed in the Notice.

II. Additional 222-225 MHz Frequency Privileges for Novices

7. The Notice next proposes to permit Novice class licensees to operate throughout the 222-225 MHz band. This authorization would permit Novice class licensees to utilize modes at 222-225 MHz other than repeaters, and to operate over a far greater frequency range than the 1.81 MHz they are presently authorized to utilize in

[8] When the Amateur Radio Service lost access to the 220-222 MHz band, it lost 40 percent of the band. Repeater operators lost slightly less than that, as repeater operation had been prohibited below 220.5 MHz under previous rules. Weak signal users, however, lost the entire 500 kHz. The instant proposal is to reestablish a subband less than a third of its former size.

the band. The proposal is based on the League's Petition for Rule Making, RM-7868, filed November 15, 1991.

8. The League's petition noted that the current Novice class privileges in the 222-225 MHz band were created in 1987 in Docket 86-161.[9] In that proceeding, the so-called "Novice Enhancement" proceeding, the League sought to increase somewhat the entry level privileges of the Novice class license; not to the extent that the character of the license class would be changed, but rather to give the Novice licensee sufficient operating flexibility to stem an unhealthy expiration rate among Novice class licensees. In that proceeding, the League supported, and the Notice of Proposed Rule Making proposed, to permit all operating modes and frequency privileges in, inter alia, the 1.25 Meter band, then 220-225 MHz, with certain power limitations. The comments in that proceeding supported that proposal, noting that such privileges would provide a "common meeting ground" for new amateur operators to meet more experienced operators. The only limitations proposed were that Novices should not be permitted to be the control operators of repeaters, and should not operate transmitters with powers greater than 25 watts.

9. In the Report and Order in that proceeding, however, the Commission chose to limit the frequency privileges of Novice class licensees to 222.10 - 223.91 MHz, which at the time corresponded to the frequencies specified in the League's band plan for repeater

---

[9] See the Report and Order, 2 FCC 2d 727, 62 RR 2d 29 (1987).

input frequencies. This was, ostensibly, to focus attention on FM repeater operation by Novices in the 220-225 MHz band.[10] There was, however, no rationale stated in the Docket 86-161 Report and Order for prohibiting operation on other modes by Novice licensees.[11]

10. There does not appear to the League any reason to limit Novice class licensees to the frequency segments associated with repeater inputs and FM operation. Novices are permitted to utilize SSB and CW on portions of the HF bands, and there is no reason why they should not be permitted to utilize those same modes in the entirety of the 222-225 MHz band where other licensees operate

---

[10] That frequency limitation for Novices was unnecessary in order to preclude them from being control operators of amateur stations in repeater operation. Section 97.205(a) of the Rules, 47 C.F.R. §97.205(a) prohibits Novices from acting as control operators of repeaters by non-inclusion. The predecessor rule, former Section 97.85, did not include such a prohibition. Novices were not allowed any VHF privileges between 1972 and 1987.

[11] The Commission stated at paragraph 13 of the Report and Order as follows:

> In its proposal regarding the 1.25 meter band (VHF), the ARRL requested that Novices be permitted use of the band 220-225 MHz with all voice and data modes, including radiotelegraphy, with a power limit of 25 watts output. However, it asked that repeater operation by stations licensed or controlled by Novices not be permitted...The comments reflected an interest in VHF privileges for Novice operators. In our view, VHF privileges for Novices would create the kind of interest that is needed for amateurs to continue in the hobby and at the same time motivate them to advance to the higher license classes. To this end, we will authorize frequencies 222.10-223.91 MHz for use by Novice operators. This action in conjunction with voluntary band plans will allow operation on repeater input and simplex channels...This would permit Novice operators to operate with those modes most appropriate to their level of license and to communicate with more experienced amateurs.

using those modes. The proposed rule change would permit Novice class licensees to communicate using SSB and CW with other users of the 222-225 MHz band, and would not require any additional knowledge on the part of Novices beyond what they currently exhibit in order to obtain their entry level license. For these reasons, the League continues to support the expansion of the frequency privileges for Novice class licensees to include the entirety of the 1.25 meter band.

III. Novice Class Licensees Should Not Be Permitted To Act As Control Operators Of Repeaters

11. The final proposal contained in the Notice is based on a Petition For Rule Making filed by Michael C. Trahos, which proposed that Novices should be permitted to serve as licensees and control operators of stations in repeater operation at 222-225 MHz and at 1270-1295 MHz. Such authorization was opposed by the League in the Novice Enhancement proceeding. There appears no greater justification for such authorization at the present time, and in fact changed circumstances since then have made such authorization less desirable than in 1987.

12. Maintenance and operation of repeaters is a specialized operating technique, which is properly reserved for licensees who have demonstrated a greater degree of technical ability than have Novice class licensees. There are currently no questions in the Novice class license examination on repeater maintenance or control operation. The Novice class licensee has not demonstrated any ability to properly maintain and operate a repeater station without

creating interference to other amateur stations, or to comply with operating rules relative to the control of repeaters, such as remote control functions, ancillary functions, or interference resolution techniques and requirements.

13. Presumably as a substitute for demonstrated technical ability to properly control and maintain a repeater station in accordance with Commission rules, the petitioner suggested a requirement that Novices who serve as control operators or licensees of repeaters utilize "commercial" repeater equipment only. As the Notice proposal states, such a provision is not possible, in view of the fact that amateur radio VHF and UHF equipment is (properly) exempt from any type acceptance criteria. No change in the status of amateur equipment from that standpoint is justified or necessary at present.

14. It is not desirable to change the entry-level character of the Novice class license at the present time. It is noteworthy that there are now two entry level routes into the Amateur Radio Service. The other is through the Technician class license. This arrangement has worked well thus far: those who would prefer not to take a more difficult written examination at the outset and whose interest is in High Frequency operation primarily can obtain a Novice class license by demonstrating proficiency in Morse Code and an introductory level theory examination. Those whose interests are more oriented toward VHF and UHF operation, (including those who desire to be the licensee or control operator of a station in repeater operation) may easily obtain the Technician class license.

There is obviously no regulatory barrier for those entry level licensees who would like to be the control operator of an amateur repeater. Indeed, the number of licensees who obtain a Technician class license as an entry level license is currently quite high relative to those who obtain Novice class licenses as their first license class.

15. Thus, there is no demonstrated need to change the character, or examination requirements, for a Novice class amateur radio license. There is a delicate balance, as the League noted in Docket 86-161, between offering Novice class licensees sufficient privileges to promote retention of the licensee's interest on the one hand, and maintaining the character of the Novice license as an entry level license class so as to encourage upgrading of one's license class and technical achievement on the other hand. There appears to the League no justification for the alteration of the character of the Novice class license at the present time by the addition of operating privileges plainly at variance with the current licensing scheme.[12] This is especially true given that a readily available alternative exists through the current Technician license class. Accordingly, the League suggests that the Commission not permit Novice class licensees to be the licensee or control operator of an amateur station in repeater operation.

---

[12] As further evidence of the incompatability of this proposal with the licensing scheme for novices, any repeater which would be under the control of a novice licensee would be operated at or below 25 watts. Repeaters would thus have to be equipped with power reduction circuitry, and output power of the repeater would have to be based on the license class of the control operator.

IV. Summary

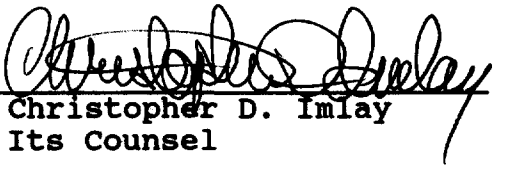
16. This proceeding addresses three interrelated, but essentially distinct issues. Two of them, the creation of a weak signal subband and the expansion of frequency privileges for Novice class licensees at 222-225 MHz, are advisable and should be adopted. The most urgent is the creation by rule of a non-repeater, non-auxiliary subband as proposed, which would protect users of operating modes in the 1.25 meter band which are not compatible with repeater or auxiliary operation there. The third issue, the authorization of Novice class control operator privileges for repeaters, is plainly unjustified and contrary to the character of the Novice class license. It would require wholesale changes in the Novice examination, which is undesirable and unnecessary in view of the ready availability of the Technician class license.

Therefore, the foregoing considered, the American Radio Relay League, Incorporated respectfully requests that the Commission implement the two proposals of the League in RM-7868 and RM-7869, and not adopt the proposal contained in RM-7888.

Respectfully submitted,

THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED

225 Main Street
Newington, CT 06111

By 
Christopher D. Imlay
Its Counsel

BOOTH, FRERET & IMLAY
1233 20th Street, N.W.
Suite 204
Washington, D. C. 20036
(202) 296-9100
February 23, 1993